Edexcel iGCSE Biology 4BI0 Learning Plan

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| **Section C11: Transport in Plants** | | |
| Specification | Resources | Assessment |
| 2.12 understand definitions of diffusion, osmosis and active transport  2.13 understand that movement of substances into and out of cells can be by diffusion, osmosis and active transport **2.14 understand the importance in plants of turgid cells as a means of support**  2.15 understand the factors that affect the rate of movement of substances into and out of cells, to include the effects of surface area to volume ratio, temperature and concentration gradient  2.16 describe experiments to investigate diffusion and osmosis using living and non-living systems.  **2.51 describe the role of phloem in transporting sucrose and amino acids between the leaves and other parts of the plant**  2.52 describe the role of xylem in transporting water and mineral salts from the roots to other parts of the plant  2.53 explain how water is absorbed by root hair cells  2.54 understand that transpiration is the evaporation of water from the surface of a plant  2.55 explain how the rate of transpiration is affected by changes in humidity, wind speed, temperature and light intensity 2.56 describe experiments to investigate the role of environmental factors in determining the rate of transpiration from a leafy shoot | Video: Biology – Section 2 – Lesson 5 – Transport – Beginning to 13:20  Powerpoint: Biology – Section 2 – Lesson 5 – Beginning to slide 53  Textbook: Ch 11 Transport in Plants  Page 122 – Osmosis  Page 123 – Osmosis in plant cells  Page 127 – Uptake of water by roots  Page 129 – Transport in the phloem  Page 129 – Structure of a stem  Page 129 – Control of transpiration by stomata  Page 130 – Measuring the rate of transpiration – photometers  Page 131 – Factors affecting the rate of transpiration  Page 131 – Uptake of mineral ions  Page 133 – End of Chapter Checklist  Chapter 11 Transport in Plants - Student checklist.doc  DVD Revision check list  <http://biology-igcse.weebly.com/functions-of-xylem-and-phloem.html>  <http://biology-igcse.weebly.com/distribution-of-xylem-and-phloem-in-roots-stems-and-leaves.html>  <http://biology-igcse.weebly.com/root-hairs-and-water-uptake-by-plants.html>  <http://biology-igcse.weebly.com/passage-of-water-through-root-stem-and-leaf.html>  <http://biology-igcse.weebly.com/transpiration-in-plants-and-factors-affecting-tranpiration-rate.html> | Textbook  Pages 133 to 134 – Questions 1 to 8  Textbook Answers (PDF)  DVD Multiple choice test  Section C11 - exam question - pdf  Section C11 - exam question mark scheme – pdf  Talking paper video – Section C11 Transport in Plants |

Videos – www.igcsesciencecourses.com

Textbook Ref: Edexcel International GCSE Biology Student Book - Pearson (Bradfield and Potter)

DVD Video Clips – see resource DVD in textbook.